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On the Use of the Binet and Simon Age Scale.

The general position reached, in our experiments, toward the use of the Binet and Simon scale is clear from the preceding note. It belongs to a general literature of tests which is rapidly being extended. Not all of the tests in the scale were devised by Binet and Simon, as they, too, drew freely on the literature of tests. Practically none of the tests was submitted by these authors to a rigorous process of testing in the manner exemplified by Thorndike and others. There has been a steady inquiry from many sources as to whether the age scale was being used, and whether it has proved of value, in connection with a neurological clinic. Under these circumstances it seemed wise, at the beginning of this year, to come to some conclusion with regard to the usefulness of this scale, on other than theoretical grounds, and to gather material for a basis of judgment from our local sources rather than to depend on the experience of others. It was found possible to do this without undue outlay of time and effort, in connection with our regular examinations, since many of the tests in the age scale are good, and are fair equivalents for general purposes of observation, of other tests that might have been selected. It has been our practice in addition to our regular test to give any other tests that might be needed to make out a complete Binet and Simon scale. In this way the Binet and Simon test has been given during the year to 506 persons of different ages and with a great variety of physical and mental ailments. Out of this number, however, 79 were supposedly normal boys from the fourth and fifth grades of a public school. These same boys had the fuller scheme of tests, so that a basis of comparison was established between what might be called a well group and a sick group. A further inspection of the Binet and Simon scale will be carried on, and will have to do with the selection of certain groups of nervous disorders, in which a sufficient number of cases will be built up to make it possible to say definitely, as has been done in the case of epilepsy, what is the exact value of this scale in a number of situations where there is a divergence from ordinary health and efficiency. The details of the work already done with the scale will have to be given elsewhere. All that can be done in a report of this length is to set down a record of an experience in a representative and interesting situation, and some of the general conclusions reached.

1. After trying a series of 200 tests according to the Goddard revision there seemed to be a decided advantage in returning to the 1911 edition of the Binet and Simon scale, as having greater internal consistency and as lending itself more readily to general interpretation.

2. This is not to be taken as suggesting that the Goddard revision is not a good age scale, or not as good as the Binet and Simon scale,

but as a suggestion that the way out of the difficulties inherent in any age scale is not to be found by having a confusing number of revisions, but to go at the whole matter of tests in the broad way made possible by the rapidly growing number of good and well tried tests. The Goddard revision seems from this point of view to be of local rather than of general interest.

3. Another conclusion from this experience with the scale is, that confusion in estimating the results of the test can be avoided only by following, with absolute fidelity, the directions in the original article by Binet and Simon, which may now be had in a good English translation. It is a common experience to come upon an over-estimate resulting from unconscious coaching by an inexperienced examiner, who seeks to make the test an interesting experience for the subject.

4. The 1911 age scale accomplishes in part one of Binet's original purposes, which was to bring out individual differences in mental efficiency. In the hands of a trained examiner the tests included in the scale can be used in such a way as to make possible some good observations of the reactions of a subject. This result, which is dependent on the ability of the examiner and on skill gained in the giving of more exact tests, is always superior in interest to any result to be gained by an exact dealing with the age scale itself.

5. The scale does not accomplish with any great degree of success the second of Binet's original purposes, which was to secure a correlation between the psychical processes carried on by an individual. It lacks sufficient variety for this purpose, and in many ages or even groups of ages, leaves unexplored some of the most fertile opportunities for the study of correlation of abilities. No particular light is thrown by the scale on the learning process, or on the reasons for mental retardation or mental deterioration.

6. The age scale has a certain value in permitting a definite record to be made of a loosely related set of efficiencies, in place of a vague description or recollection. Making some allowances for difference in examiners, this forms a fair medium for the exchange of ideas between different observers, and it is probable that this explains in great measure the wide popularity of the tests. It has not been found that the Binet and Simon scale furnishes a sufficiently complete record to be of service in the exact study of widely varied types of mental efficiency or inefficiency, such as are met in a neurological clinic.

7. The most satisfactory use found for the scale for clinical purposes has been to give it always in connection with definite growth periods. Thus, if the tests are given for one year in the pre-adolescent period, they should be given for all the years in that period. The scale has considerable integrity from this point of view in its middle section, and to use it in this way obviates most of the criticisms as to the proper placing of the tests in the scale. It is usually found that a person who fails in the tests covering one of the growth periods makes an unsatisfactory progress through the succeeding period. That Binet himself regarded such a use of the scale worthy of serious consideration is shown by an article in his *Année Psychologique* for 1912 from the Psychological Laboratory of Milan.

8. There are few provisions in the Binet and Simon presentation of the scale against the possibility of using it without properly considering the problem of the individual under observation. Solicitude for the further development of efficiency tests would seem to suggest a firmer emphasis on these facts: that no test has any significance in itself; that tests are at best only aids to the interpretation of a thoroughly

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studied situation; that no test has any validity that does not bear directly on the problem of adaptation to situations; that the final worth of the test depends on the environment in which it is found, which is first the environment furnished by a well formulated individual problem, and second the environment furnished by a number of other tests, so arranged as to give a series of checks on the fragmentary information secured from the single test. While the middle tests in the Binet and Simon scale seem to show some recognition of these criteria, the later tests are from this point of view pretty much out of alignment.

9. Except for the very limited and popular uses noted it is not possible to place a high value on the scale. It is not complete enough to be of use as a general efficiency test. It is still less suited for use in mental diagnosis. Its measures are too rough for any exact purpose in estimating degrees of inferiority, and when applied by inexpert persons, or persons lacking in due caution, are apt to raise unnecessary or harmful prejudice. It may be possible to use them in such a way as to separate children into classes and designate them as idiots, imbeciles and morons, but numberless cases come up in connection with the neurological clinic where the application of such measures of intelligence would be both misleading and prejudicial to the best interests of a patient.

10. Although it is outside the strict province of this note, the experience had in using the scale with a group of normal children suggests that it has great limitations as an instrument for educational diagnosis. There is, at least, an implication that, if the so-called mental age of a child can be determined, he can then be properly placed with regard to his school opportunities, and that this settles satisfactorily the whole question of what can be done to develop his full efficiency. Many instances could be cited from this clinic where a complete but wholly unwarranted satisfaction was derived by teacher or parent from the results of this loose use of the scale.

Briefly summarized, the use of the Binet and Simon scale in connection with a neurological clinic indicates that, in the hands of a skilled observer, it has a limited value for exploratory and descriptive purposes, but that it is neither exact enough nor complete enough to form an adequate basis for a diagnosis of mental efficiency or mental deficiency, or to serve as a basis for a social or educational diagnosis which has inherent uses for practical ends; that its validity is subject to serious question whenever it is used as other than an elementary device for partially trained or hard pressed observers; and that anyone who has a moderate training and sufficient perseverance can get much more satisfactory results by drawing freely on the individual tests in the scale, and supplementing these from the general storehouse of tests that can be found in such an available source as the new edition of Whipple's Manual of Mental and Physical Tests.

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